

No 37

316 Market

Ch.  
16<sup>#</sup>

Dated March 15<sup>th</sup> 1826

An  
Essay  
on

Cholera Morbus

by

William Seal

of

Pennsylvania

October 30<sup>th</sup> 1825

den in deller auf

Wilde

Wilde

W

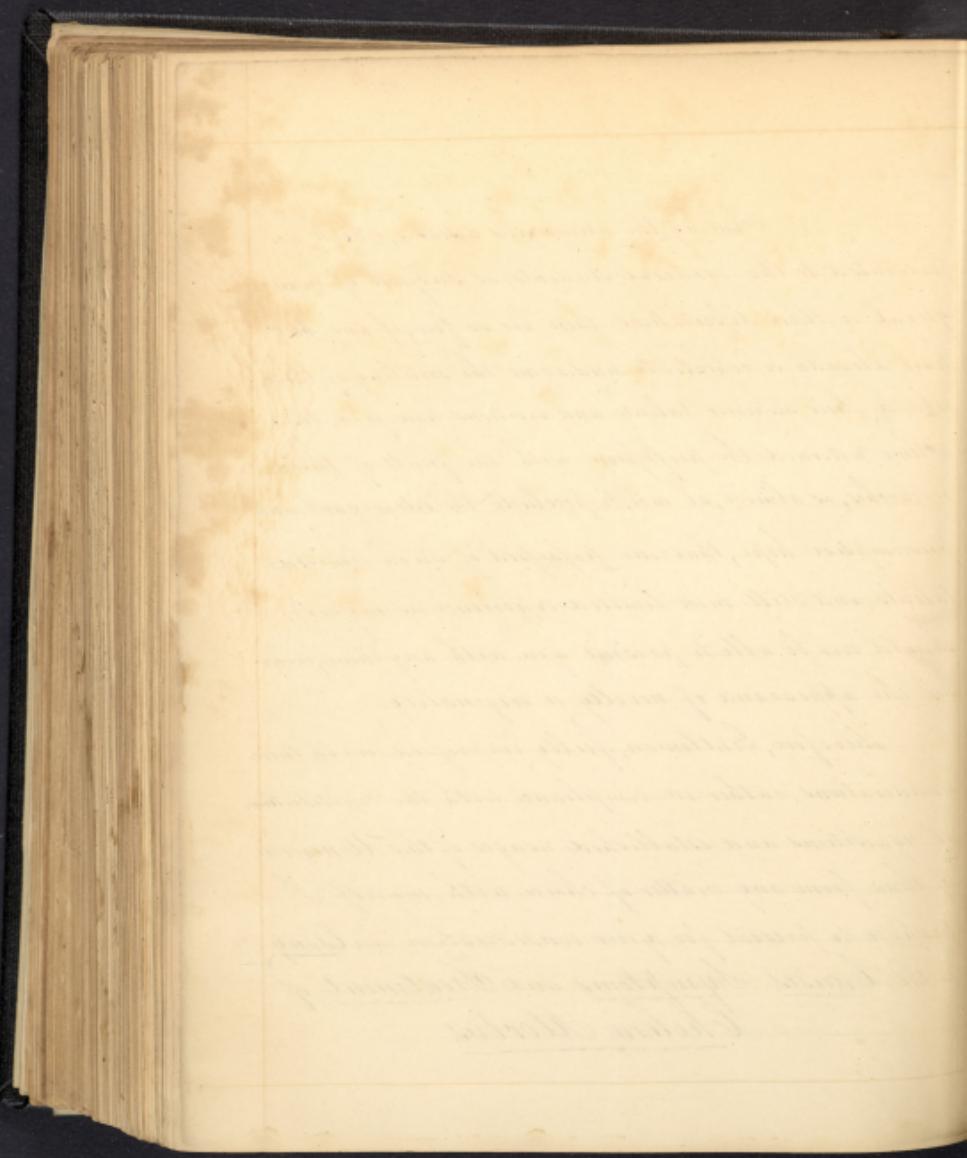
Wilde

Wilde

Wilde

Among the numerous diseases, which are presented to the medical students, as subjects of inaugural or other dispositions, there are so few, if any, but have already so repeatedly undergone the scrutiny of those, who by their superior talents and exertions have from time to time adorned the profession with the fruits of their researches, as almost, at once, to preclude the tressurant and presumptuous hope, that one possessed of such limited talents and still more limited experience as myself, should ever be able to present you with anything, wearing the appearance of novelty or originality.

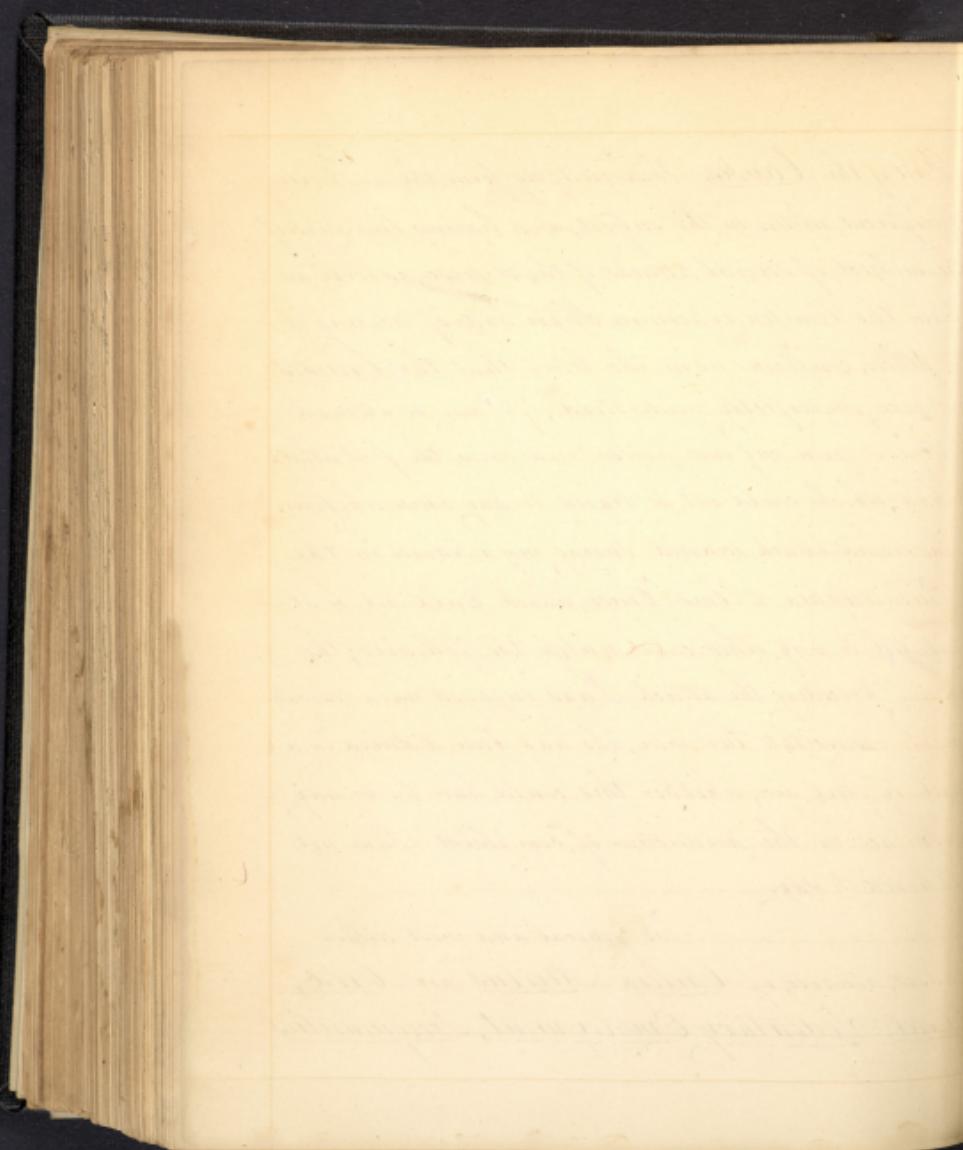
Therefore, Gentlemen, fully impressed with these considerations, rather in compliance with the constitutional requisitions and established usages of this University than from any matter of choice with myself I propose to present for your consideration an Essay, on the Causes, Symptoms and Treatment of Cholera Morbus.



First of the Causes. Thus, judging from the authority of different writers on the subject, and having been myself the subject of several attacks of the disease, as well as from the limited experience I have had of treating it in others, confirm us in the belief that the Causes are very imperfectly understood; if I may be allowed to judge from my own person and from the first attack I had, which could not be traced to any cause whatever.

The second attack occurred during my residence in the Philadelphia Alm-House, which could not be attributed to any other cause until the following; the evening preceding the attack I was engaged in endeavouring to resuscitate two men, who had been destroyed in a well by foul air, whether this could have had any influence in the production of <sup>the</sup> complaint I am not prepared to say.

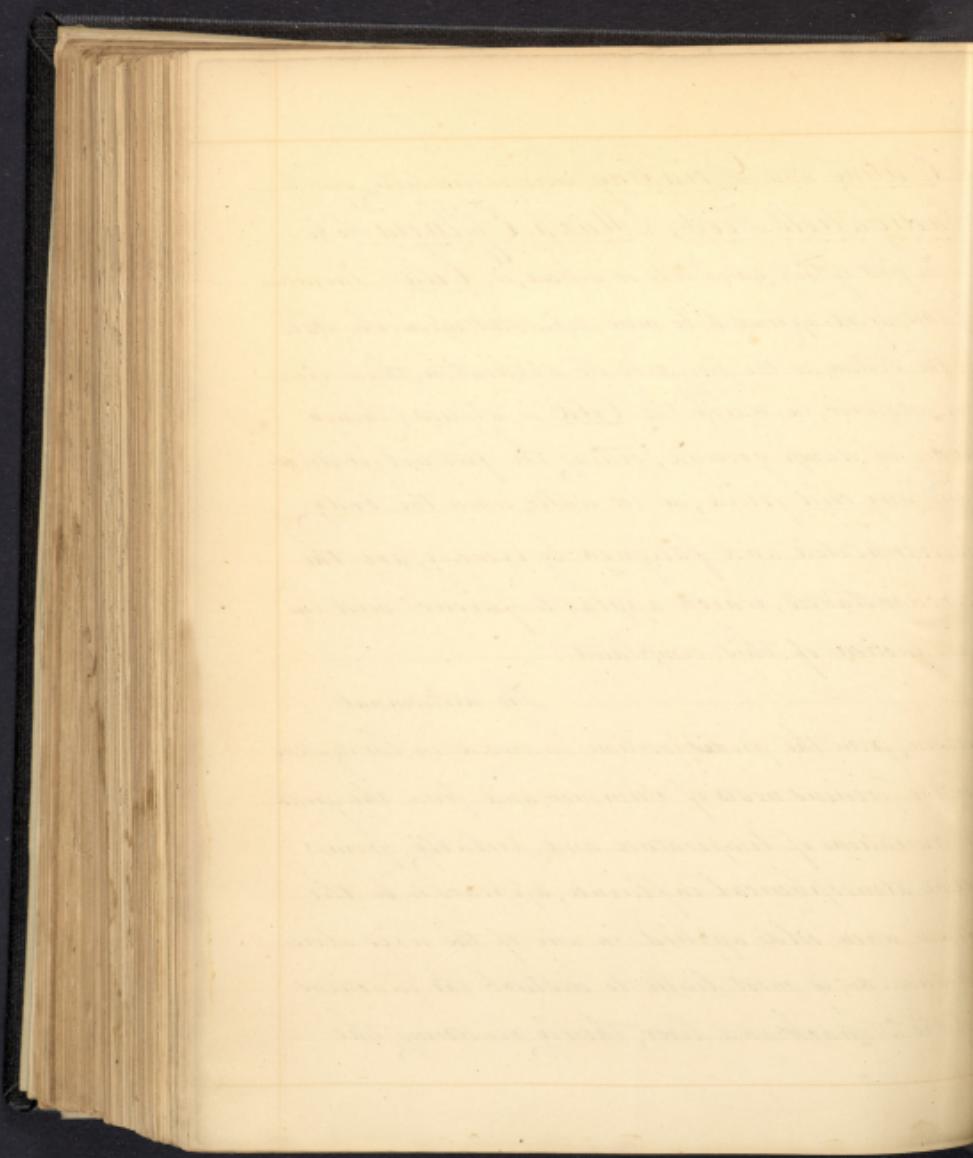
The general and most certain causes, however, of Cholera Mortis are Cold, Heat, Sedentary Employment, Irregularities.



in Eating and Drinking, more particularly, of  
Indigestible Food, Marsh Effluvia &c &c

The first of these, which is to be noticed, is Cold. The action of this agent appears to be more dependent upon the state of the system at the period of its application, than upon the manner, in which the Cold is applied; though lying on damp ground, getting the feet wet, or drinking any cold fluid, as ice water, when the body is over-heated and fatigued by exercise, are the circumstances, which appear to favour most the production of this complaint.

The autumnal season, from the predisposition induced in the system by the previous heats of summer, and from the great variations of temperature and, probably, from some atmospheric influence, appears to be the season, when cold applied in any of the ways above mentioned, is most liable to distract the functions of the stomach and liver, thereby rendering the

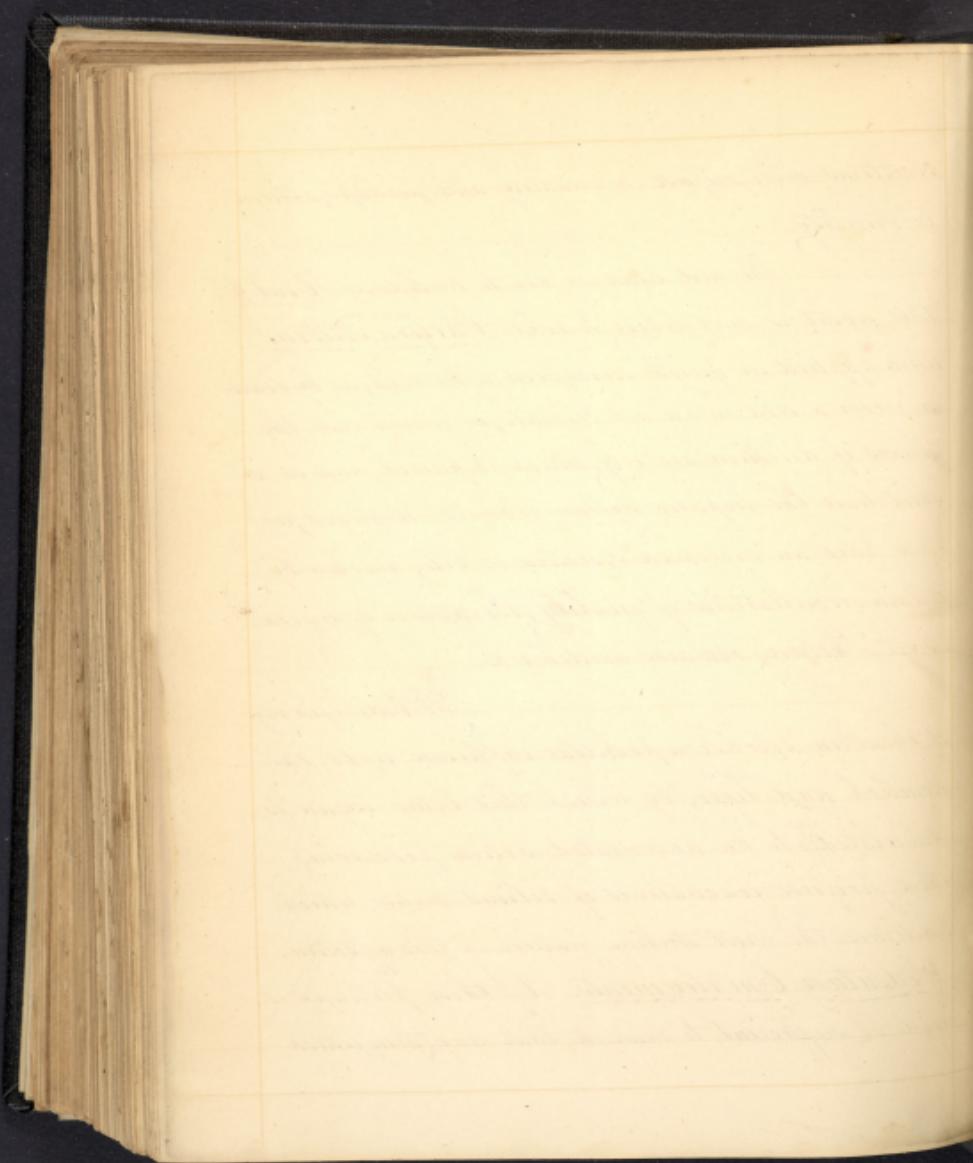


secretions more profuse in quantity and, perhaps, altered in quality.

The next cause, we are to consider, is Heat; this agent is most likely to excite Cholera Mortis when applied in quick succession after cold, as by removing from a cold into a hot climate, in which case the powers of digestion are very much impaired, and in a short time the hepatic system becomes strangled, we then have an increased secretion of bile, marked by certain peculiarities of quality, the nature of which, as yet, positive, remain undecided.

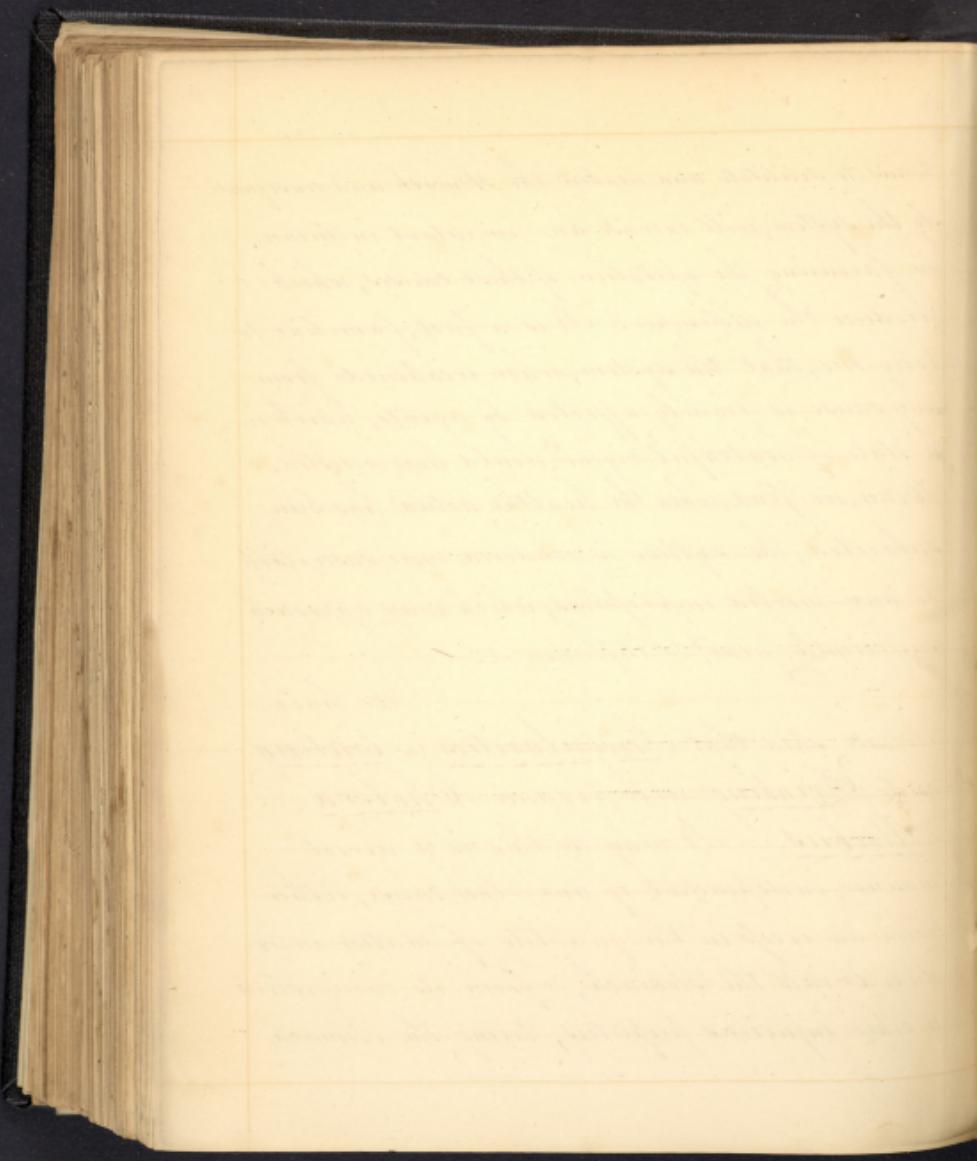
The calorific rays of the sun exercise a peculiar influence upon the stomach and liver, by which this latter organ is stimulated to an augmented action producing those profuse evacuations of bilious matter, which constitute the most striking feature in this affection.

Sedentary Employment. Of these perhaps it will be sufficient to remark, that anything which



tends to debilitate and weaken the Stomach and consequent-  
ly the system, will exercise an important influence  
in favouring the operation of those causes, which  
produce the distemper. It is a fact, familiar to  
every one, that the system, when weakened from  
any cause, is readily affected by agents, which in  
a state of healthful vigour would have resisted.  
Hence, we find, when the healthy action has been  
subverted, the system is rendered more susceptible  
to any morbid impressions, which may approach  
sufficiently near, to influence it.

We have  
already said that Pregularities in Eating  
and Drinking will produce Cholera  
Morbus. It may do this in a direct  
manner, independent of any other cause, either  
from an excess in the quantity of matter intro-  
duced into the Stomach, or from its indigestible  
or other injurious properties, taxing the Stomach



intestines and liver to an inordinate action, followed by debility in the former, and a profuse secretion from the latter organ. In those cases, however, in which irregularities of diet have produced the complaint, it will, we think, be generally found, that some of the preceding causes of debilitating the system, have created a predisposition to the formation of this complaint.

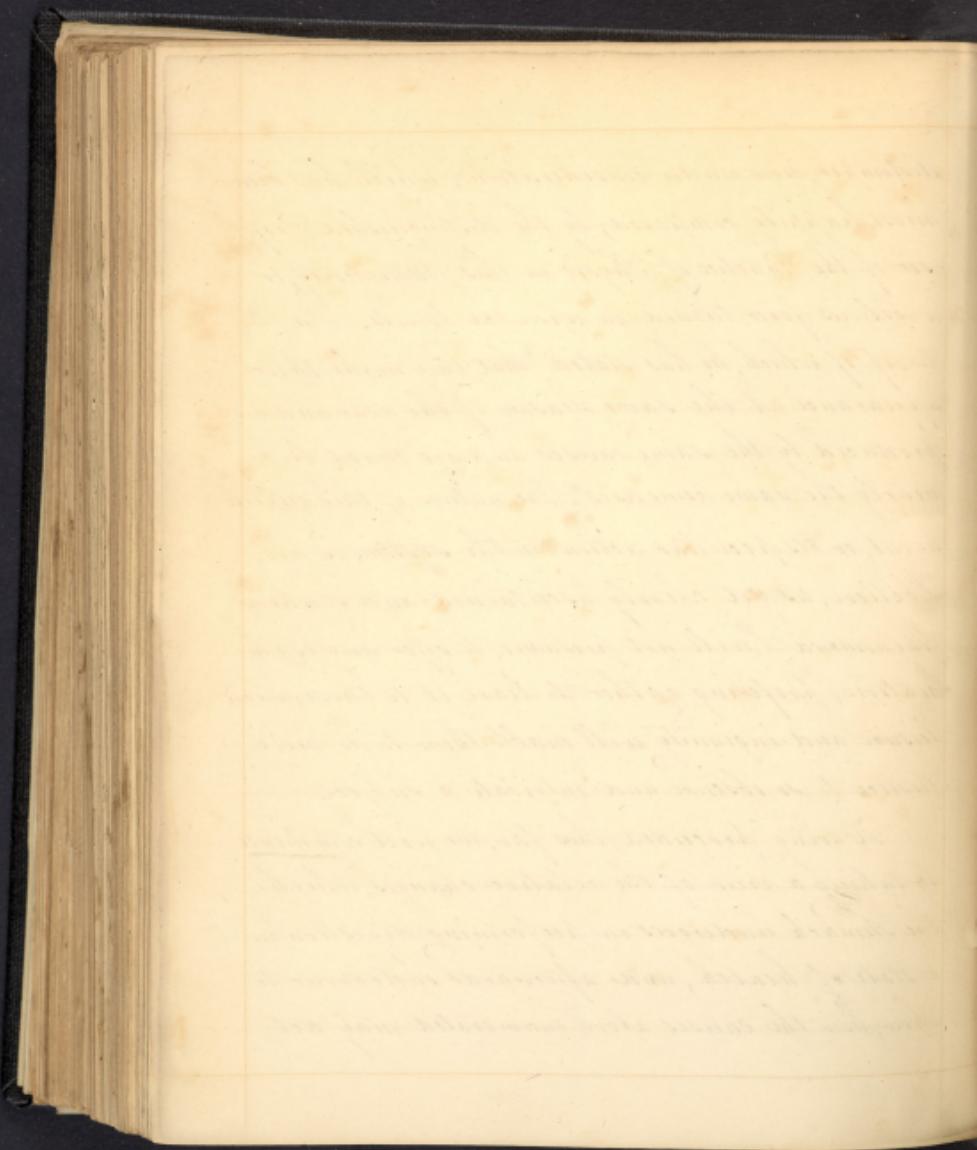
In considering, therefore, the diet which may appear improper or otherwise, we must, always, be guided by the circumstances under which it is used; for many articles will be found injurious under certain conditions of the stomach and system, which at another time would have proved wholesome and nutritious so that, which is suitable in health, becomes often decidedly injurious in a state of disease.

Malarial Effluvia. This perhaps may be considered the most prolific cause of the



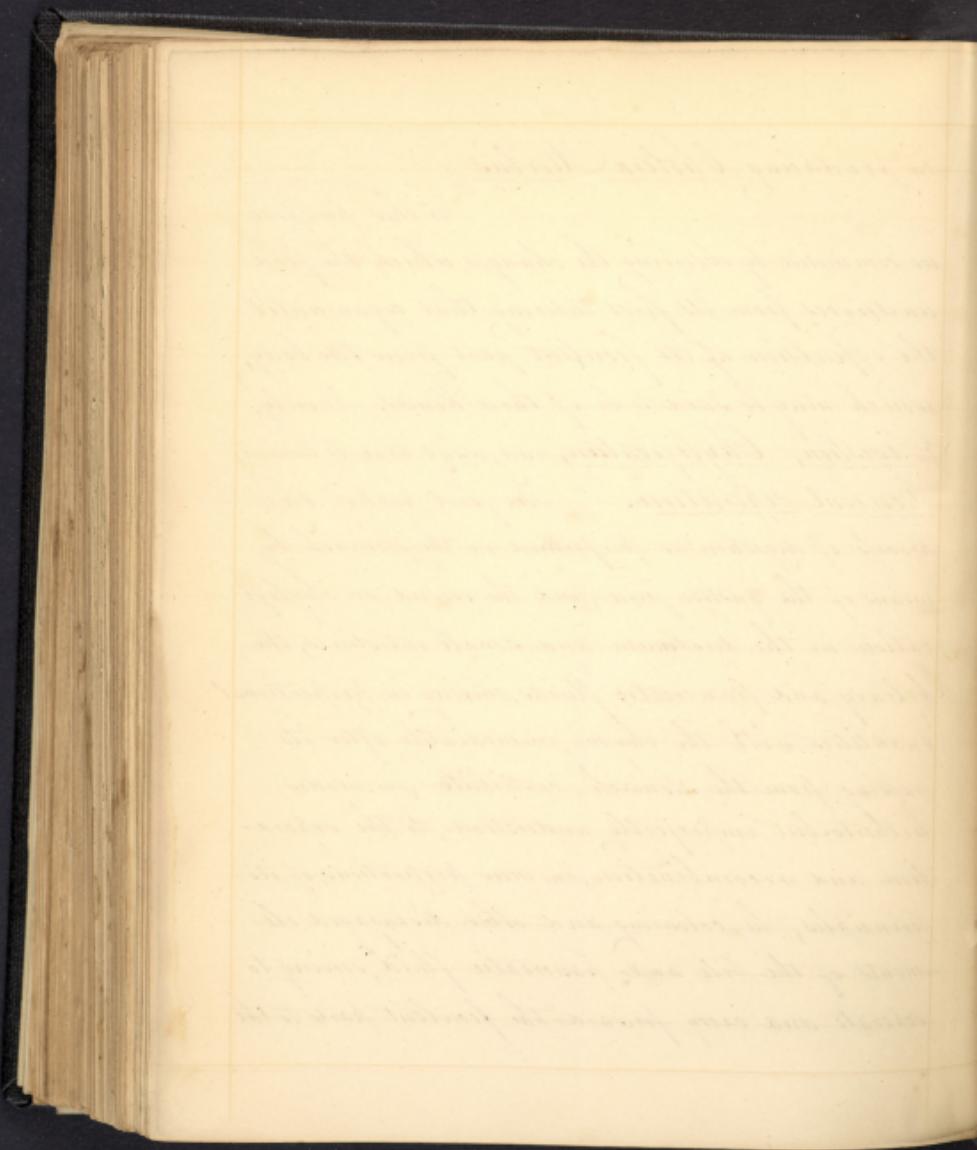
distemper, now under consideration, which has been  
most happily compared; by the distinguished Proff-  
essor of the Practice of Physic in this University to  
a bilious fever, turned in upon the bowels. In  
proof of which, he has stated "that they make their  
appearance at the same season of the year and are  
produced by the same causes and are cured by  
nearly the same remedies". The nature of this subtle  
agent, or its peculiar action on the system, is not,  
I believe, as yet clearly ascertained and of which  
phenomena I will not presume to offer any expla-  
nation, preferring rather to leave it to those, whose  
leisure and ingenuity will enable them to do more  
justice to so obscure and intricate a subject.

Having proceeded thus far, we will commence  
by taking a view of the relative changes, which  
the stomach undergoes in performing digestion in  
a state of health, and afterwards endeavour to  
shew, how the causes above enumerated may act



in producing Cholera Morbus

For this purpose we commence by observing the changes, which the food undergoes from its first entering that organ, until the expulsion of its feculent part from the body, which may be said to be of three kinds. Namely, Decomposition, Chylification, and, what may be termed, Faeculent Separation. The first part of the process of digestion is performed in the Stomach by means of the gastric juice, and the second or chylification in the duodenum and small intestine, the biliary and pancreatic fluids, mixing in proportional quantities with the chyme, immediately after its passing from the stomach, contribute, in modes hitherto but imperfectly understood, to the separation and recombination, in new proportions, of its principles, the colouring and other disengaged elements of the bile and pancreatic fluid, serving to elaborate and carry forward the feculent parts to the



large intestine, where the entire process of digestion is completed.

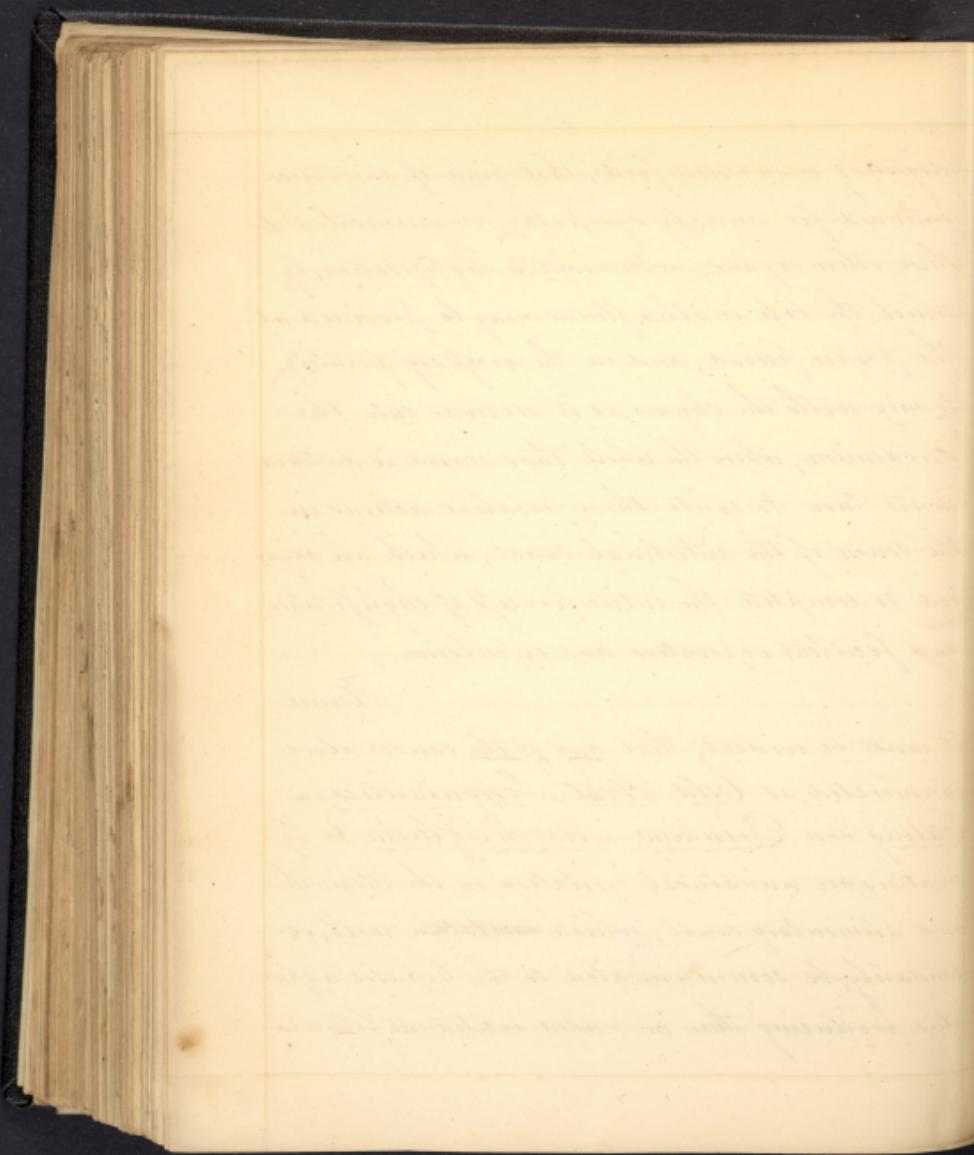
These several processes are carried on by organs, whose actions, as we have already mentioned, are rendered accordant and cooperative by means of various connection subsisting between them, which has been denominated sympathy, and it is by the agency of this sympathetic union, that the quantity of fluids secreted and the periods of their secretion are adjusted. The food, when taken into the mouth, excites there, by its stimulus, the action of the salivary glands, and it is, by the same proper and direct impulse, that the glands, secreting the fluids of the stomach, are affected. But, as the Liver and Pancreas lie out of the reach of direct excitement, they must be stimulated into action by an indirect impulse, communicated by sympathy from the stomach. In this case, the latter organ, in all probability receives from the

2  
volumen de sucesos de la vida  
de su autor. La obra se divide en  
seis partes, que constan de 120 capí-  
tulos. La primera parte trae la  
historia de la fundación de la  
ciudad de México, y de sus  
progresos y desgracias. La  
segunda parte trata de la  
conquista de Méjico por los  
españoles, y de la muerte del  
emperador Montezuma. La  
tercera parte trae la descripción  
de las costumbres y usos de  
los indios mexicanos, y de  
sus creencias religiosas. La  
cuarta parte trae la descripción  
de la conquista de Méjico por  
los españoles, y de la muerte del  
emperador Montezuma. La  
quinta parte trae la descripción  
de las costumbres y usos de  
los indios mexicanos, y de  
sus creencias religiosas. La  
sexta parte trae la descripción  
de la conquista de Méjico por  
los españoles, y de la muerte del  
emperador Montezuma.

digesting or digested foods, that kind of animation intended for and, by sympathy communicated to these other organs, subservient to chylification, by which, the bile or other fluids may be provided at the proper period, and in the necessary quantity, to mix with the chyme, as it descends into the duodenum, where the whole thus mixed is destined in its turn to excite those peculiar actions in the course of the intestinal canal, which are required to complete the entire process of chylification and feculent separation and expulsion.

Hence

it must be evident that any of the causes above enumerated, as Cold, Heat, Irregularities in Eating and Drinking, Marsh Effluvia &c by creating an unnatural irritation in the stomach and alimentary canal, which ~~irritation~~ will, secondarily, be communicated to the hepatic apparatus, producing there an undue excitement followed



by those effects which constitute the disease called  
Cholera Morbus. With these remarks I  
conclude, all that I have to say on the subject of  
the causes of Cholera Morbus, and proceed, in  
the next place, to give some account of the sym-  
ptoms, attending it.

This disease is, for the most part,  
characterized by some tenderness of the Abdomen, with  
more or less pain and distention, succeeded by copious  
and frequent evacuations of bilious matter, upwards  
and downwards. It is, also, generally attended with  
some heat of the surface, insatiable thirst, a hurried  
respiration, a frequent, but weak and fluttering  
pulse, when the disease is not violent, these sym-  
ptoms, after continuing for a longer or shorter pe-  
riod, gradually subside, leaving the patient in a  
weak and debilitated state. But, when the  
disease proceeds with more violence, the pulse,  
which from the begining was weak and fluttering,



becomes still more so, attended with great prostration of strength, cold, clammy sweat, haggard and ghastly countenance, great anxiety, cold extremities, a short and hurried respiration. At this period of the attack the muscles of the abdomen and extremities become affected with cramps and other painful affections accompanied by hiccough, loss of voice, great gastric distress, sinking pulse, &c. This, if not quickly arrested, terminates in the death of the patient, an event, which not unfrequently happens within the space of twenty four hours, and sometimes, even, in a much shorter time.

These are the symptoms, which generally distinguish the disease, under consideration. But, as in every other malady, we do not always find them all combined, in the same case, as was fully exemplified in my own person in an attack before alluded to, in which case, there was no particular sensation at the commencement,



except a fullness of the abdomen, unaccompanied by  
any soreness or pain. I retired to bed, as well as  
usual and enjoyed an undisturbed repose until  
two O'clock the next morning, when I awoke with  
a disposition to go to stool, with the symptoms  
just mentioned, I arose and in the course of an hour  
I had a number of profuse evacuations from the  
bowels, which were succeeded by vomitings of bilious  
matter, in a short time, was seized with cramps  
in my feet, legs, loins and hands, and soon became  
so completely exhausted, as to be wholly unable to  
get from the bed and the fæces were discharged  
involuntarily. So violent, indeed, was the attack,  
that in the space of two hours and a half, I had  
given up all hopes of recovery, which opinion I  
believe was also entertained, by those, who were in  
attendance. Other varieties are also to be met  
with in this disease—but which perhaps it is  
unnecessary to detail.

in the same place as before. I have now  
got the last part of my book. I have written  
down all the names of the birds that I have  
seen. The first bird is a small bird with  
black feathers. It has a white patch on its  
wing. The second bird is a small bird with  
brown feathers. It has a white patch on its  
wing. The third bird is a small bird with  
black feathers. It has a white patch on its  
wing. The fourth bird is a small bird with  
brown feathers. It has a white patch on its  
wing. The fifth bird is a small bird with  
black feathers. It has a white patch on its  
wing. The sixth bird is a small bird with  
brown feathers. It has a white patch on its  
wing. The seventh bird is a small bird with  
black feathers. It has a white patch on its  
wing. The eighth bird is a small bird with  
brown feathers. It has a white patch on its  
wing. The ninth bird is a small bird with  
black feathers. It has a white patch on its  
wing. The tenth bird is a small bird with  
brown feathers. It has a white patch on its  
wing. The eleventh bird is a small bird with  
black feathers. It has a white patch on its  
wing. The twelfth bird is a small bird with  
brown feathers. It has a white patch on its  
wing. The thirteenth bird is a small bird with  
black feathers. It has a white patch on its  
wing. The fourteenth bird is a small bird with  
brown feathers. It has a white patch on its  
wing. The fifteenth bird is a small bird with  
black feathers. It has a white patch on its  
wing. The sixteenth bird is a small bird with  
brown feathers. It has a white patch on its  
wing. The seventeenth bird is a small bird with  
black feathers. It has a white patch on its  
wing. The eighteenth bird is a small bird with  
brown feathers. It has a white patch on its  
wing. The nineteenth bird is a small bird with  
black feathers. It has a white patch on its  
wing. The twentieth bird is a small bird with  
brown feathers. It has a white patch on its  
wing. The twenty-first bird is a small bird with  
black feathers. It has a white patch on its  
wing. The twenty-second bird is a small bird with  
brown feathers. It has a white patch on its  
wing. The twenty-third bird is a small bird with  
black feathers. It has a white patch on its  
wing. The twenty-fourth bird is a small bird with  
brown feathers. It has a white patch on its  
wing. The twenty-fifth bird is a small bird with  
black feathers. It has a white patch on its  
wing. The twenty-sixth bird is a small bird with  
brown feathers. It has a white patch on its  
wing. The twenty-seventh bird is a small bird with  
black feathers. It has a white patch on its  
wing. The twenty-eighth bird is a small bird with  
brown feathers. It has a white patch on its  
wing. The twenty-ninth bird is a small bird with  
black feathers. It has a white patch on its  
wing. The thirtieth bird is a small bird with  
brown feathers. It has a white patch on its  
wing. The thirty-first bird is a small bird with  
black feathers. It has a white patch on its  
wing. The thirty-second bird is a small bird with  
brown feathers. It has a white patch on its  
wing. The thirty-third bird is a small bird with  
black feathers. It has a white patch on its  
wing. The thirty-fourth bird is a small bird with  
brown feathers. It has a white patch on its  
wing. The thirty-fifth bird is a small bird with  
black feathers. It has a white patch on its  
wing. The thirty-sixth bird is a small bird with  
brown feathers. It has a white patch on its  
wing. The thirty-seventh bird is a small bird with  
black feathers. It has a white patch on its  
wing. The thirty-eighth bird is a small bird with  
brown feathers. It has a white patch on its  
wing. The thirty-ninth bird is a small bird with  
black feathers. It has a white patch on its  
wing. The forty-third bird is a small bird with  
brown feathers. It has a white patch on its  
wing.

Having now, described the Causes and Symptoms of Cholera Morbus, we will in the next place consider those measures, which are proper to be employed for its cure.

The Treatment of this complaint is properly divided, into that, which is necessary during an attack and that, which will most effectually prevent a relapse.

The first indication consists in the complete removal of the offending matter, situated in the Stomach; to fulfil which we resort to those medicines which will facilitate the expulsion of the contents of the stomach; these are emetics; and the one, which appears the best calculated to fulfil this, is Precacuantha in the dose of 3*iij*; and its effects are to be promoted by diluent drinks. By the emetic, the stomach is relieved and the system before depressed, now recovers and we have a more manageable form of the disease presented to us. Precacuantha not only evacuates



the contents of the stomach, but also by its antispasmodic and diaphoretic powers, induces relaxation of spasm and determination to the surface; having thus cleared the stomach of the offending cause, the next indication is certainly to calm the irritation of that organ; to do which, some of the following means will generally be found efficient, such as Lime Water and Milk, a tablespoonfull of each, given occasionally, has been found useful; or the common effervescent draught, seltzer water, mint or clove tea will, sometimes, prove advantageous; should these, not answer, an opiate should be administered, or Calomel, in small doses, at the  $\frac{1}{4}$  or  $\frac{1}{2}$  of a grain.

With the same view, an enema of Opium should be occasionally be administered aided by frotions and fomentations, over the epigastrium, which are always beneficial and exceedingly grateful to the patient, these may consist of spirits or Brandy heated, with the addition of some spices, in which

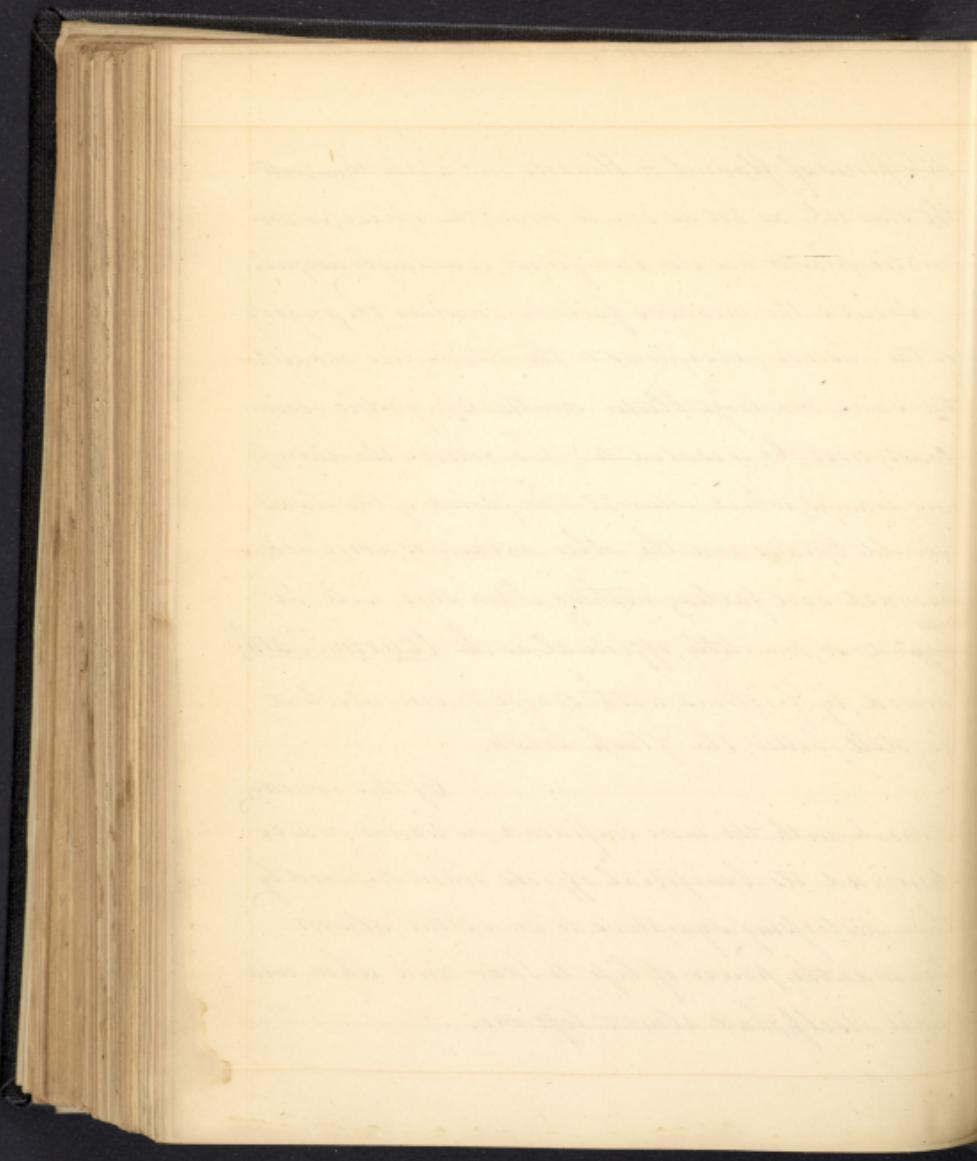


dip pieces of flannel or blankets and apply them, over the stomach as hot as can be borne; the spirit, or aromatic plaster has also been found, exceedingly useful.

Should the measures fail in arresting the progress of the disease, simpisms to the extremities and, either the same or a large blister over the Epigastric region must, next, be resorted to. To relieve the distressing cramps, which occur at this period of the disease, Should Opiates and the other measures, above recommended have failed, nothing, I am sure, will be found so, completely, effectual, as the Warm Bath, aided, by Frictions, with coarse towels, or, what is still better, the Flesh brush.

Of this remedy,

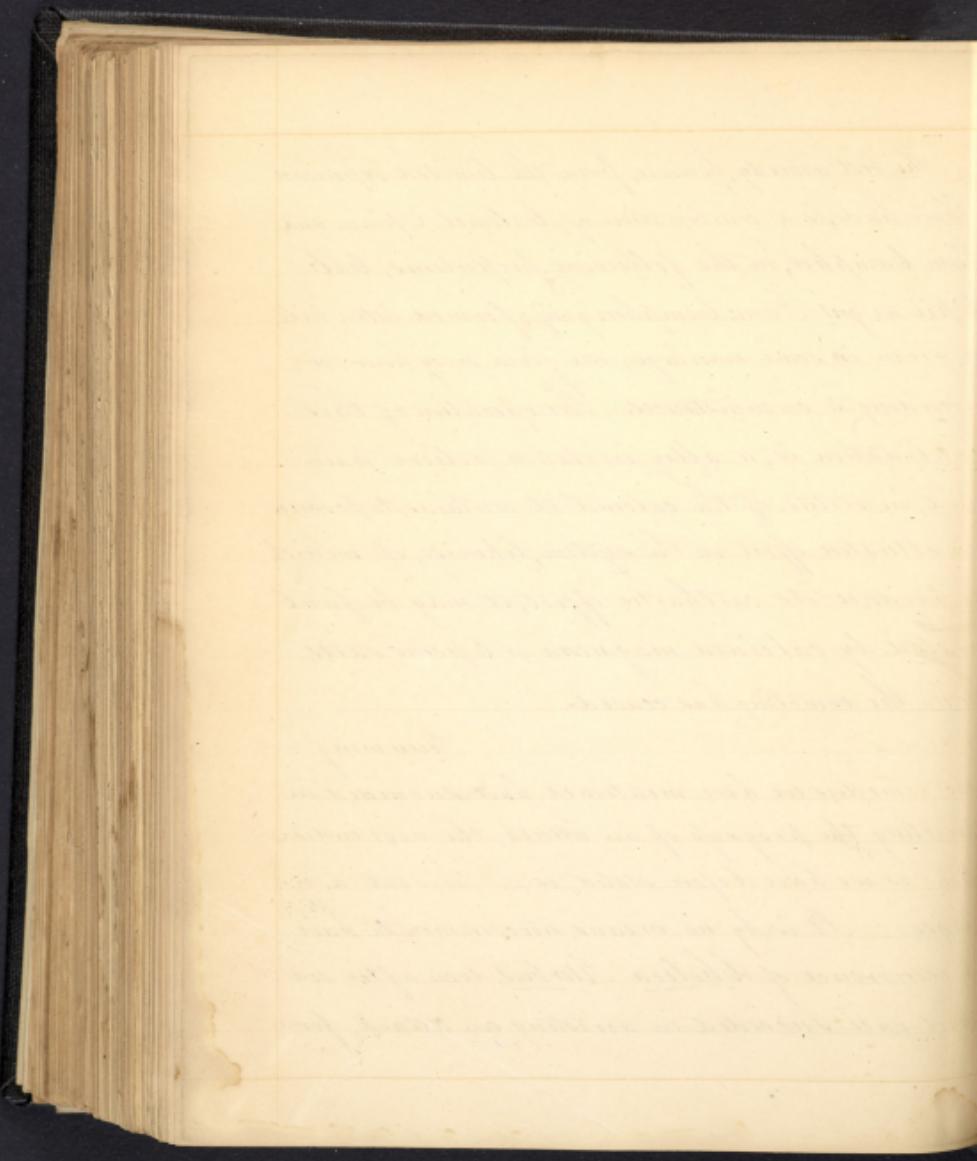
I speak, with the more confidence, as having once experienced its beneficial effects, when tortured by those distressing symptoms to an extent, almost beyond the power of life to bear and when, even hope itself, had almost left me.



The best remedy, however, from the limited experience I have had, is a combination of Calomel, Opium, and Gum Camphor, in the following proportions, take:

Opii ~~as per~~ 1 drachm  
Gum: Camphor: resin; formed into a pill,  
or given in some macilage; one given every hour or  
according to circumstances. The operation of this  
combination is, to allay irritation, relieve pain  
and, in virtue of the calomel it contains, to produce  
an astringent effect on the system, likewise, if we wish  
to produce its cathartic effect, it may be facil-  
itated by calcined magnesia or Epsom salts,  
when the vomiting has ceased.

Presuming the remedies we have mentioned, have succeeded in  
arresting the progress of an attack, the next indica-  
tion, as we have before stated, is, to prevent a re-  
lapse. It is, by no means, uncommon to have  
a recurrence of Cholera Morbus, even after we  
have once succeeded in arresting an attack, for



which season, it becomes a matter of importance for the Physician to employ such measures, as shall guard against such an event; to secure the patient, against such an inconvenience, we should, carefully, guard against all the exciting causes, such as we have already, more than once, alluded to, in the course of this Essay. Particular attention should, also, be paid to the state of the bowels, these should be kept in a soluble condition by the occasional use of mild laxative or purgative medicines, as often salty Magnesia, Rhubarb or Castor oil.

The system and alimentary canal, being always proternaturally exhausted, after an attack of this disease, renders it necessary, that we should resort to those medicines, which impart tone and strength to the system generally, for this purpose, we may administer some of the vegetable bitters, such, as an infusion of Quassia or Colombo, or we may give, the Elixir Bitriol &c.

informed as to either. I would like to make this  
a new column in our old and original all  
over the world. It seems to have been omitted  
from our first two newspapers in New York  
and from some others but it is a very  
good idea and all should  
be asked for it. I am sending  
you a copy of the one I have  
and you can see how it  
looks. I hope you will like it.  
I am sending you a copy of the one I have  
and you can see how it  
looks. I hope you will like it.

Should the predisposition to a recurrence still exist, it is quite probable, that it is kept up by some derangement of the Liver itself; in which case, nothing will be found so effectual, as a course of Mercury, urged to salivation.

The clothing of persons of this description is a matter of no small importance and should by no means be overlooked in the prophylactic treatment of this disease. The wearing of flannel next to the skin has been found an excellent preventive in all the bowel affections, and not less so in Cholera Morbus.

